



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Attorney Docket No.: P-457 (TI-0018)

Inventors: Gjerde et al.

Serial No.: 09/826,055

Filing Date: April 3, 2001

Examiner: Jeffrey Siew

Group Art Unit: 1637

Title: Modifying Double Stranded DNA to Enhance
Separations by Matched Ion
Polynucleotide Chromatography

I, Jane Massey Licata, Registration No. 32,257,
certify that this correspondence is being deposited
with the U.S. Postal Service as First Class mail in
an envelope addressed to the Commissioner for Patents
P.O. Box 1450, Alexandria, VA 22313-1450

On this date: July 25, 2003

Jane Massey Licata
Jane Massey Licata, Registration No. 32,257

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

INFORMATION DISCLOSURE STATEMENT

Pursuant to 37 C.F.R. §1.56 and in accordance with 37 C.F.R. §§1.97-1.98, information relating to the above-identified application is hereby disclosed. Inclusion of information in this statement is not to be construed as an admission that this information is material as that term is defined in 37 C.F.R. §1.56(b).

(XX) In accordance with §1.97(b), since this Information Disclosure Statement is being filed either within three months of the filing date of the above-identified

application, within three months of the date of entry into the national stage of the above identified application as set forth in §1.491, or before the mailing date of a first Office Action on the merits of the above-identified application, no additional fee is required.

- () In accordance with §1.97(c), this Information Disclosure Statement is being filed after the period set forth in §1.97(b) above but before the mailing date of either a Final Action under §1.113 or a Notice of Allowance under §1.311, therefore:
 - () Certification in Accordance with §1.97(e) is attached hereto; or
 - () The fee of \$180.00 as set forth in §1.17(p) is attached.
- () In accordance with §1.97(d), this Information Disclosure Statement is being filed after the mailing date of either a Final Action under §1.113 or a Notice of Allowance under §1.311 but before the payment of the Issue Fee, therefore included are: Certification in Accordance with §1.97(e); Petition Requesting Consideration of the Information Disclosure Statement; and the fee of \$130.00 as set forth in §1.17(I)(1).
- (xx) Copies of each of the references listed on the attached Form PTO-1449 (modified) are enclosed herewith with the exception of BZ, CA, CB, CC, CF and CG. In view of the voluminous nature of these publications and the likelihood that the

Examiner may have a copy available to him or her, a copy has not been included herewith. However, if the Examiner does not have a copy available, Applicant will endeavor to supply one at the Examiner's request.

- () In accordance with §1.98(d), copies of some or all of the references listed on the attached Form PTO-1449 (modified) are not enclosed herewith because they were previously submitted to the U.S. Patent and Trademark Office in prior application Serial No. _____, filed _____, for which a claim for priority under 35 U.S.C. §120 has been made in the instant application.

Please charge any deficiency or credit any overpayment to Deposit Account No. 50-1619. This form is submitted in duplicate.

- () The relevance of the listed references in a foreign language is as stated in the specification at pages @@.

(XX) All listed references are in the English language.

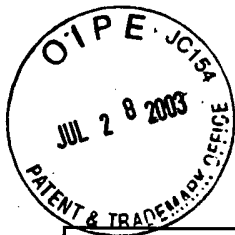
Respectfully submitted,

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Sheet 01 of 06

Form PTO-1449 Modified

List of Patents and Publications
Cited by Applicant
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U.S. Department of Commerce

Docket No.
P-457 (TI-0018)Serial No.
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1637

U. S. PATENT DOCUMENTS

Examiner Initial		Document No.	Date	Name	Class	Subclass
	AA	4,855,255	8-8-89	William Goodhue	437	129
	AB	5,656,742	8-12-97	Mead McCabe	536	24.3
	AC	5,522,994	6-4-96	Frechet et al.	210	635
	AD	5,595,726	1-21-97	Magda et al.	424	9.61
	AE	4,647,529	3-3-87	Rodland et al.	435	6
	AF	5,772,889	6-30-98	Gjerde et al.	210	635
	AG	4,563,510	1-7-86	John Ugelstad	526	66
	AH	5,410,030	4-25-95	Yue et al.	536	23.1
	AI	5,321,130	6-14-94	Yue et al.	536	23.1
	AJ	5,432,134	7-11-95	Park et al.	501	134

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Examiner Initial		Document No.	Date	Country	Translation YES NO	
	AK	EP 0 634 640 A1	27-5-94	EPO	x	

EXAMINER

DATE CONSIDERED



<p align="center">Form PTO-1449 Modified</p> <p>List of Patents and Publications Cited by Applicant (Use several sheets if necessary)</p> <p>U.S. Department of Commerce</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Docket No. P-457 (TI-0018)</td> <td style="width: 50%;">Serial No. 09/826,055</td> </tr> <tr> <td colspan="2">Applicant Gjerde et al.</td> </tr> <tr> <td>Filing Date April 3, 2001</td> <td>Group 1637</td> </tr> </table>	Docket No. P-457 (TI-0018)	Serial No. 09/826,055	Applicant Gjerde et al.		Filing Date April 3, 2001	Group 1637
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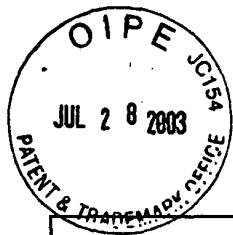
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	AL	5,445,946	8-29-95	Roth et al.	435	34
	AM	4,716,905	1-5-88	Laurence Schmued	128	654
	AN	5,800,996	9-1-98	Lee et al.	435	6
	AO	5,639,874	6-17-97	Middendorf et al.	536	25.32
	AP	5,795,976	8-18-98	Oefner et al.	536	25.4
	AQ	5,459,039	10-17-95	Modrich et al.	435	6
	AR	5,698,400	12-16-97	Cotton et al.	435	6
	AS	5,585,236	12-17-96	Bonn et al.	435	5
	AT	4,855,255	8-8-89	William Goodhue	437	129

FOREIGN PATENT DOCUMENTS

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List of Patents and Publications Cited by Applicant (Use several sheets if necessary)		Applicant Gjerde et al.	
		Filing Date April 3, 2003	Group 1637
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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)			
	BA	Cabera et al., "A new challenge in fast high-performance liquid chromatography separations", Trends Analytical Chem. 1998 17(1):50-53	
	BB	Cooper et al., "An estimate of unique DNA sequence heterozygosity in the human genome", Human Genetics 1985 69:201-205	
	BC	Cotton, R.G.H., "Slowly but surely towards better scanning for mutations", TIG 1997 13(2):43-46	
	BD	H. Engelhardt et al., "Polymer Encapsulated Stationary Phases:Advantages, Properties and Selectives", Chromatographia 1989 27(11/12):535-543	
	BE	Goodwin et al., "Studies on the preparation and characterisation of monodisperse polystyrene latices", Colloid & Polymer Sci. 1974 252:464-471	
	BF	Guyer et al., "How is the Human Genome Project doing, and what have we learned so far?", Proc. Natl. Acad. Sci. USA 1995 92:10841-10848	
	BG	Hayward-Lester et al., "Accurate and Absolute Quantitative Measurement of Gene Expression by Single-tube RT-PCR and HPLC", Genome Research 1995 5:494-499	
	BH	He et al., "On-the-Fly Fluorescence Lifetime Detection of Dye-Labeled DNA Primers for Multiplex Analysis", Anal. Chem. 1998 70:3413-3418	
	BI	Huber et al., "Rapid Analysis of Biopolymers on Modified Non-Porous Polystyrene - Divinylbenzene Particles" Chromatographia 1993 36:653-658	
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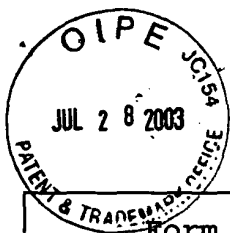
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	BJ	Huber et al., "High-Resolution Liquid Chromatography of Oligonucleotides on Nonporous Alkylated Styrene-Divinylbenzene Copolymers" Anal. Biochem. 1993 212:351-358
	BK	Jinno et al., "Manarity Recognition of Large Polycyclic Aromatic Hydrocarbons by Various Octadecylsilica Stationary Phases in Non-Acqueous Reversed-Phase Liquid Chromatography", Chromatographia 1989 27(7/8):285-291
	BL	Kuklin et al., "Detection of Single-Nucleotide Polymorphisms with the WAVE™ DNA Fragment Analysis System", Genet. Test. 1997/98 1(3):201-206
	BM	Liu et al., "Denaturing high performance liquid chromatography (DHPLC) used in the detection of germline and somatic mutations", Nucleic Acid Res. 1998 26:1396-1400
	BN	Morgan et al., "Large-scale purification of haptenated oligonucleotides using high-performance liquid chromatography", J. Chromatography 1991 536:85-93
	BO	Myers et al., "Modification of the melting properties of duplex DNA by attachment of a GC-rich DNA sequence as determined by denaturing gradient gel electrophoresis", Nucleic Acids Res. 1985 13:3111-3129
	BP	Nakanishi et al., "Phase Separation in Silica Sol-Gel System Containing Poly(ethylene oxide). 1. Phase Relation and Gel Morphology", Bull, Chem. Soc. Jpn 1994 67:1327-1335
	BQ	Nakanishi et al., "Double Pore Silica Gel Monolith Applied to Liquid Chromatography", J. Sol-Gel Sci. Technol. 1997 8:547-552
	BR	Nunnally et al., "Characterization of Visible Dyes for Four-Delay Fluorescence Detection in DNA Sequencing", Anal. Chem. 1997 69:2392-2397

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	BS	Oefner et al., "High-Performance Liquid Chromatography for Routine Analysis of Hepatitis C Virus cDNA/PCR Products", BioTechniques 1994 16(5):898-908	
	BT	Oefner et al., "High-Resolution Liquid Chromatography of Fluorescent Dye-Labeled Nucleic Acids", Anal. Biochem. 1994 223:39-46	
	BU	Petro et al., "Molded Monolithic Rod of Macroporous Poly(Styrene-co-divinylbenzene) as a Separation Medium for HPLC of Synthetic Polymers: "On-Column" Precipitation-Redissolution Chromatography as an Alternative to Size Exclusion Chromatography of Styrene Oligomers and Polymers", Anal Chem 1996 68:315-321	
	BV	Seielstad et al., "Construction of human Y-chromosomal haplotypes using a new polymorphic A to G transition", Human Mol. Genet. 1994 3(12):2159-2161	
	BW	Sheffield et al., "Attachment of a 40-base-pair G+C-rich sequence (GC-clamp) to genomic DNA fragments by the polymerase chain reaction results in improved detection of single-base changes", Proc. Natl. Acad. Sci USA 1989 86:232-236	
	BX	Underhill et al., "Detection of Numerous Y Chromosome Biallelic Polymorphisms by Denaturing High-Performance Liquid Chromatography", Genome Research 1997 7:996-1005	
	BY	Underhill et al., "A pre-Columbian Y chromosome-specific transition and its implications for human evolutionary history", Proc. Natl. Acad. Sci. USA 1996 93:196-200	
	BZ	Handbook of Fluorescent Probes and Research Chemicals, Ch. 8.1 1997	
	CA	Oefner et al., DHPLC Workshop, Stanford University, Palo Alto, CA March 17, 1997	
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	CB	Perrin in Organic Complexing Reagents: Structure, behavior, and Application to Inorganic Analysis, Robert E. Krieger Publishing Co., 1964
	CC	Gjerde et al., in Ion Chromatography, 2nd Ed. Dr. Alfred Hühthig Verlag Heidelberg 1987
	CD	Poole, Colin F. and Salwa K. Poole, Chromatography Today, Elsevier: New York 1991 pp. 313-342
	CE	Snyder R.L. and JJ Kirkland, Introduction to Modern Liquid Chromatography 2nd ed. John Wiley & Sons, Inc.,: New York 1979 pp. 272-278
	CF	R.K. Iler in The Chemistry of Silica, Solubility, Polymerization, Colloid and Surface Properties, and Biochemistry, John Wiley & Sons: New York 1979
	CG	Laboratory Methods for the Detection of Mutations and Polymorphisms, ed. GR Taylor CRC Press 1997
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